

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A drive unit including
an electric motor ~~(1)~~,
a drive unit casing ~~(2)~~ accommodating therein the electric motor,
an inverter ~~(3)~~ that controls the electric motor, and
a flow passage ~~(4)~~ of a refrigerant that cools the inverter,
wherein the drive unit characterized in that the inverter is mounted on the drive unit casing such that a heat sink ~~(33, 53)~~ united with a substrate of the inverter defines a space ~~(R)~~ on a portion thereof opposed to the drive unit casing, a thermally insulating intermediate member is interposed between mating surfaces of the heat sink and the drive unit casing,
the space is communicated to the flow passage of the refrigerant,
the heat sink comprises heat-sink side fins ~~(36, 56)~~ extending into the space toward the drive unit casing,
the drive unit casing comprises drive-unit-casing side fins ~~(22)~~ extending into the space toward the heat sink, and
the heat-sink side fins and the drive-unit-casing side fins are apart from each other.

2. (original): The drive unit according to claim 1, wherein the heat-sink side fins and the drive-unit-casing side fins cooperatively generate a common refrigerant flow pattern within the space.

3. (original): The drive unit according to claim 2, wherein one of the heat-sink side fins and the drive-unit-casing side fins comprises rib-shaped fins and the other of them comprises pin-shaped fins.

4. (original): The drive unit according to claim 1 or 2, wherein the heat-sink side fins and the drive-unit-casing side fins cooperatively and substantially cross the space with a minute gap therebetween.

5. (previously presented): The drive unit according to claim 2, wherein the heat-sink side fins and the drive-unit-casing side fins comprise the same fins.

6. (original): The drive unit according to claim 5, wherein both the heat-sink side fins and the drive-unit-casing side fins comprise pin-shaped fins.

7. (previously presented): The drive unit according to claim 2, wherein the heat-sink side fins and the drive-unit-casing side fins comprise the same fins.

8. (previously presented): The drive unit according to claim 7, wherein both the heat-sink side fins and the drive-unit-casing side fins comprise pin-shaped fins.

9. (previously presented): The drive unit according to claim 1, wherein the heat-sink side fins and the drive-unit-casing side fins cooperatively and substantially cross the space with a minute gap therebetween.

10. (previously presented): The drive unit according to claim 9, wherein the heat-sink side fins and the drive-unit-casing side fins comprise the same fins.

11. (previously presented): The drive unit according to claim 10, wherein both the heat-sink side fins and the drive-unit-casing side fins comprise pin-shaped fins.

12. (previously presented): The drive unit according to claim 4, wherein the heat-sink side fins and the drive-unit-casing side fins comprise the same fins.

13. (previously presented): The drive unit according to claim 5, wherein both the heat-sink side fins and the drive-unit-casing side fins comprise pin-shaped fins.

14. (new): The drive unit according to claim 1, wherein the intermediate member forms a seal between the mating surfaces of the heat sink and the drive unit casing.